REMARKS

Applicants note by way of initial comment that the Office Action at the bottom third of page 11 includes text that obviously does not belong with the present application and has been ignored. If Applicants' assumption is not correct, Applicants request clarification.

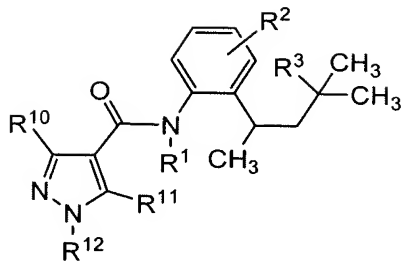
In view of the restriction requirement discussed below, Applicants have amended Claims 20 and 21 to limit the definition of group L to the phenyl moieties within the meaning of L1 and have accordingly canceled Claim 22 as being redundant and Claim 23 as being outside the scope of the elected subject matter. Applicants have also amended Claims 20 and 21 to insert the word "and" between the last definitions of groups R^9 and A, which amendments have no substantive effect on the scope of the claims.

Applicants acknowledge the indication that Claims 21, 22, 24, 25, 27, and 30 are objected to as being dependent on rejected Claim 20. As discussed below, Applicants have canceled Claim 25 as being redundant.

Restriction Requirement under 35 U.S.C. 121

Applicants acknowledge that examination has been limited to Group I (i.e., Claims 20-22, 24, 25, 27, and 30 to the extent that L is L1 and A is formula (A1)) and gratefully acknowledge the indication that Group XXIV (i.e., Claim 31 directed the use of compounds of formula (I)) may be subject to rejoinder if the claims within Group I are found allowable. Despite Applicants' belief that their traversal with respect to Group XII (i.e., Claims 20-22, 24-28, and 30 to the extent that L is L2, L3, or L4 and A is formula (A1)) is based on relevant chemical or biological properties rather than an artificial classification system, Applicants have nevertheless amended their claims to exclude the thiophene moieties L2, L3, and L4 and have canceled Claim 25 as being redundant. Applicants again reserve the right to file one or more divisional applications directed to the non-elected subject matter.

To simplify comparison of Applicants' claimed compounds with those of the references cited below, Applicants provide the following representation of the compounds of elected Group I:



where the various substituents have the meanings given in the claims above.

Rejection under 35 U.S.C. 112

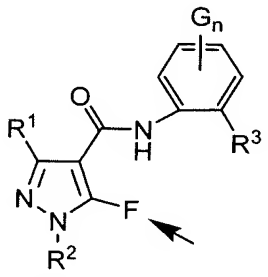
Claim 30 stand rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement due to claiming a composition for controlling unwanted microorganisms. Applicants respectfully traverse.

The phrase "for controlling unwanted microorganisms" is merely a statement of purpose and would not ordinarily be considered a claim limitation. Since the stated purpose is not a necessary limitation, Applicants have amended Claim 30 to delete the phrase and respectfully submit that they have thereby traversed the rejection.

Rejection under 35 U.S.C. 103

Claims 20-22, 24, 25, 27, and 30 stand rejected under 35 U.S.C. 103(a) as being unpatentable over DE 10136065 by Elbe et al ("the '065 publication") (which corresponds to published US 2004/0204470, listed in Applicants' Form PTO 1449) in view of the teaching of bioisosterism in the cited article by Patani et al, *Chem. Rev.*, 96, 3147-3176 (1996). Applicants respectfully traverse.

The German language '065 publication discloses pyrazolylcarboxanilides having the formula



in which **R**^{1} is hydrogen, cyano, halogen, nitro, (halo)alkyl, cycloalkyl, (halo)alkoxy, (halo)alkylthio, or aminocarbonylalkyl; **R**^{2} is hydrogen, (halo)alkyl, alkenyl, cycloalkyl, (halo)alkylthioalkyl, or (halo)alkoxyalkyl; **R**^{3} is unsubstituted C_2-C_{20}-alkyl, C_1-C_{20}-alkyl that is mono- or polysubstituted by halogen or cycloalkyl, or optionally halogen-

or cyclohexyl-substituted alkenyl or alkynyl; **G** is halogen or alkyl; and **n** is 0, 1, or 2. E.g., '065 publication at page 1, line 16, through page 2, line 17. A critical feature of such compounds is fluorine substitution at the 5-position of the pyrazole ring (as shown by the arrow, where the 5-position numbering is that used for compound names in the reference). Applicants' claimed compounds, in contrast, never have a fluorine at the pyrazole 5-position.

Applicants therefore submit that the '065 publication would not itself suggest their claimed invention. Applicants also submit that the Patani et al article would not lead those skilled in the art to their claimed invention.

The Patani et al article beginning at page 3149 discusses several examples of bioisosterism relating to fluorine substitution, including replacement of hydrogen by fluorine (e.g., pages 3149-3150) and interchangeability of hydrogen, fluorine, hydroxyl, amino, and methyl groups (e.g., pages 3152-3155). However, it is also clear that the Patani et al article teaches that significant differences in biological activity can arise when making such changes. For example, Figure 2 shows an almost four-fold greater binding affinity going from H to F in one naphtyl-fused diazepine and an almost twenty-fold greater binding affinity for a second naphtyl-fused diazepine; Figure 3 shows about 2.6 times greater anti-inflammatory activity for a difluoro androstane derivative compared to the monohydro/monofluoro analog and about 1.5 times greater activity anti-inflammatory activity for a different monohydro/monofluoro androstane derivative compared to the dihydro analog; and Figure 11 shows about 1.6 times greater angiotensin converting enzyme activity and about 2.4 times greater endopeptidase activity for a fluorine-substituted test compound. Thus, while the fluorine-substituted compounds showed greater activity in these tests than their non-fluorinated counterparts, the specific degree of activity was highly variable and unpredictable from compound to compound and test to test. Therefore, even if is assumed that hydrogen can be replaced with fluorine, that does not necessarily mean that one skilled in the art would be able to predict what activity or level of activity would result.

In further support of their position, Applicants now submit Declarations under 37 C.F.R. 1.132 of Dr. Ulrike Wachendorff-Neumann and Dr. Peter Dahmen (enclosed) showing that the inventive compound of Applicants' Example 6 exhibits unexpectedly superior efficacy at several application rates in three different

antimicrobial tests compared with a corresponding fluorine-substituted compound falling within the general teachings of the '065 publication. Applicants submit that those skilled in the art would not expect such differences in efficacy and thus would not be led by the cited references to their claimed invention.

Applicants therefore respectfully submit that their claimed invention is not rendered obvious by DE 10136065 in view of the Patani et al article.

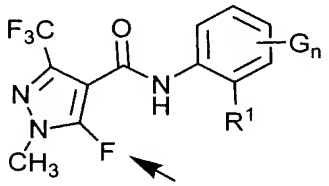
Double Patenting Rejections

Applicants claims stand rejected or provisionally rejected on the ground of nonstatutory obviousness-type double patenting based on several copending applications (one of which has issued).

A. U.S. Patent 7,358,214

Claims 20-22, 24, 25, 27, and 30 stand rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over Claims 1-7 of U.S. Patent 7,358,214 ("the '214 patent"). Applicants respectfully traverse.

The '214 patent discloses and claims pyrazolylcarboxanilides of the formula



in which $\mathbf{R^1}$ is unsubstituted C_2-C_{20}-alkyl, C_1-C_{20}-alkyl that is mono- or poly-substituted by halogen or cycloalkyl, or optionally halogen- or cyclohexyl-substituted alkenyl or alkynyl; **G** is halogen or alkyl; and **n** is 0, 1, or 2. E.g., '214 patent at column 1, lines 15-42. A critical feature of such compounds is fluorine substitution at the 5-position of the pyrazole ring (as shown by the arrow), a feature not found in Applicants' claimed compounds.

Furthermore, Example 1 of the ' 214 patent specifically discloses the compound used in the comparison experiments discussed above with respect to the obviousness rejection based on DE 10136065 and the Patani et al article. In view of the unexpectedly superior efficacy of Applicants' inventive compound of Example 6 (which lacks a 5-fluoro substituent on the pyrazole ring) at several application rates in three different antimicrobial tests, Applicants respectfully submit that their claimed invention is fully distinguishable from the claims of the '214 patent.

Applicants therefore believe that terminal disclaimer with respect to the '214 patent is not necessary.

B. Published US 2004/0204470

Claims 20-22, 24, 25, 27, and 30 stand provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over Claims 22-35, 37, and 46 of copending US 2004/0204470 ("the '470 publication"). Applicants respectfully traverse.

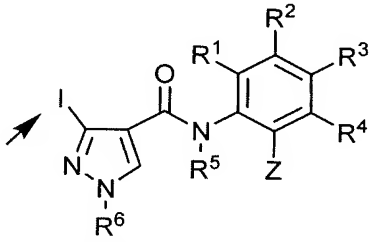
The '470 publication is a counterpart of DE 10136065, which is subject to the obviousness rejection discussed above. For essentially the same reasons discussed above with respect to the obviousness rejection, Applicants submit that their claimed invention is patentably distinct from the '470 publication.

Applicants therefore believe that terminal disclaimer with respect to the '470 publication is not necessary.

C. Published US 2007/0066673

Claims 20-22, 24, 25, 27, and 30 stand provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over Claims 11, 12, and 14 of copending US 2007/0066673 ("the '673 publication"). Applicants respectfully traverse.

The '673 publication discloses iodopyrazolylcarboxanilides of the formula



in which **R^1**, **R^2**, **R^3**, and **R^4** are independently hydrogen, fluorine, chlorine, methyl, isopropyl, or methylthio; **R^5** is hydrogen, (halo)alkyl, haloalkylthio, (halo)alkylsulfinyl, (haloalkyl)sulfonyl, (halo)alkoxyalkyl, (halo)cycloalkyl; formylalkyl, (halo)alkyl-carbonyl-(halo)alkyl, (halo)alkoxycarbonyl-(halo)alkyl, $-COR^7$ (where R^7 is hydrogen, (halo)alkyl, (halo)alkoxy, (halo)alkoxyalkyl, (halo)cycloalkyl, or $-COR^{12}$ (where R^{12} is hydrogen, (halo)alkyl, (halo)alkoxy, (halo)alkoxyalkyl, or (halo)cycloalkyl)), $-CONR^8R^9$ (where R^8 and R^9 are independently hydrogen, (halo)alkyl, (halo)alkoxy-alkyl, or (halo)cycloalkyl or together form a saturated heterocycle), or $-CH_2NR^{10}R^{11}$ (where R^{10} and R^{11} are independently hydrogen, (halo)alkyl, or (halo)cycloalkyl or

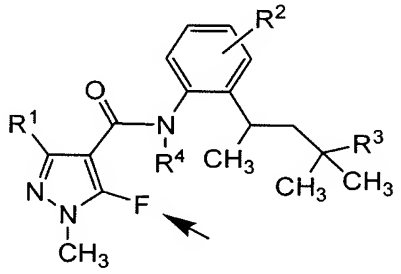
together form a saturated heterocycle), **R^6** is (halo)alkyl or alkoxyalkyl; and **Z** is optionally substituted phenyl, unsubstituted C_2-C_{20}-alkyl, C_1-C_{20}-alkyl that is mono- or polysubstituted by halogen or cycloalkyl, or optionally substituted alkenyl or alkynyl or Z and R^4 together form an optionally substituted 5- or 6-membered carbocyclic or heterocyclic ring when R^1, R^2, and R^3 are independently hydrogen, fluorine, or chlorine. E.g., paragraphs [0003] through [0019]. A critical feature of such compounds is iodine substitution at the 3-position of the pyrazole ring (as shown by the arrow), a structural feature not found in Applicants' claimed compounds.

Although Applicants believe that their claimed invention is patentably distinct from the '673 publication, Applicants would be willing to submit an appropriate terminal disclaimer as suggested in the Office Action if their claims are otherwise found allowable.

D. Published US 2007/0072930

Claims 20-22, 24, 25, 27, and 30 stand provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over Claims 13-18 of copending US 2007/0072930 ("the '930 publication"). Applicants respectfully traverse.

The '930 publication discloses pyrazolylcarboxanilides of the formula



in which **R^1** is methyl, trifluoromethyl, or difluoromethyl; **R^2** is hydrogen, fluorine, chlorine, methyl, or trifluoromethyl; and either *(a)* **R^3** is hydrogen and **R^4** is (halo)-alkyl, haloalkylthio, (halo)alkylsulphinyl, (halo)alkylsulphonyl, (halo)alkoxyalkyl, (halo)cycloalkyl, formyl, formylalkyl, (halo)alkylcarbonylalkyl, (halo)alkoxycarbonyl-alkyl, (halo)cycloalkylcarbonyl, -C(=O)C(=O)R^5 (where R^5 is hydrogen, (halo)alkyl, (halo)alkoxy, (halo)alkoxyalkyl, or (halo)cycloalkyl), -CONR^{6}R^7 (where R^6 and R^7 are independently hydrogen, (halo)alkyl, (halo)alkoxyalkyl, or (halo)cycloalkyl or together form a saturated heterocycle), or -CH_2NR^{8}R^9 (where R^8 and R^9 are independently hydrogen, (halo)alkyl, or (halo)cycloalkyl or together form a saturated heterocycle) or

(b) $\mathbf{R^3}$ is halogen or (halo)alkyl and $\mathbf{R^4}$ is (halo)alkyl, haloalkylthio, (halo)alkyl-sulphinyl, (halo)alkylsulphonyl, (halo)alkoxyalkyl, (halo)cycloalkyl, formyl, formylalkyl, (halo)alkylcarbonylalkyl, (halo)alkoxycarbonylalkyl, (halo)alkylcarbonyl, (halo)alkoxy-carbonyl, (halo)alkoxyalkylcarbonyl, (halo)cycloalkylcarbonyl, $-C(=O)C(=O)R^5$ (where R^5 is hydrogen, (halo)alkyl, (halo)alkoxy, (halo)alkoxyalkyl, or (halo)cycloalkyl), $-CONR^6R^7$ (where R^6 and R^7 are independently hydrogen, (halo)alkyl, (halo)alkoxy-alkyl, or (halo)cycloalkyl or together form a saturated heterocycle), or $-CH_2NR^8R^9$ (where R^8 and R^9 are independently hydrogen, (halo)alkyl, or (halo)cycloalkyl or together form a saturated heterocycle). E.g., paragraphs [0003] through [0015]. A critical feature of such compounds is fluorine substitution in the pyrazole ring (as shown by the arrow), a feature not found in Applicants' claimed compounds.

As discussed above with respect to the obviousness rejection based on DE 10136065 in view of the Patani et al article, Applicants have shown the inferiority of compounds of this type having a 5-fluoro substituent on the pyrazole ring. Although the tested compounds differ from those specified in the '930 publication in that the nitrogen atom of the bridging amide function is not substituted as required in the reference, Applicants believe that their data, though indirectly relevant, support their position that their claimed invention is patentably distinct from the 'reference. See *In re Best, Bolton and Shaw*, 562 F.2d 1529, 195 U.S.P.Q. 430, 432 (C.C.P.A. 1977), which stands for the proposition that even indirect comparisons, when "based on established scientific principles, can validly be applied to distinguish a claimed chemical process or product from that disclosed in the prior art"; see also *In re Blondel, Fouche, and Gueremy*, 499 F.2d 1311, 182 U.S.P.Q. 294 (C.C.P.A. 1974).

Nevertheless, Applicants would be willing to submit an appropriate terminal disclaimer as suggested in the Office Action if the claims are otherwise found allowable.

Claim Objections

Claim 25 stands objected to as being a substantial duplicate of Claim 20. Applicants inadvertently failed to delete the claim in their previous Amendment dated September 23, 2008. As mentioned above, Applicants have canceled Claim 25 and respectfully submit that they have thereby traversed this objection.

Claims 21, 22, 24, 25, 27, and 30 stand objected to a being dependent on rejected Claim 20. For the reasons broadly discussed above, Applicants submit that they have traversed this objection.

In view of the preceding amendments and remarks, allowance of the claims is respectfully requested.

Respectfully submitted,

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